National Defence / Défense nationale

CANADIAN ARMED FORCES

DEFENCE INVESTMENT PLAN 2018

Ensuring the Canadian Armed Forces is well-equipped and well-supported

STRONG SECURE ENGAGED

PLAN DELIVER ENABLE

Canada

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Defence Investment Plan 2018
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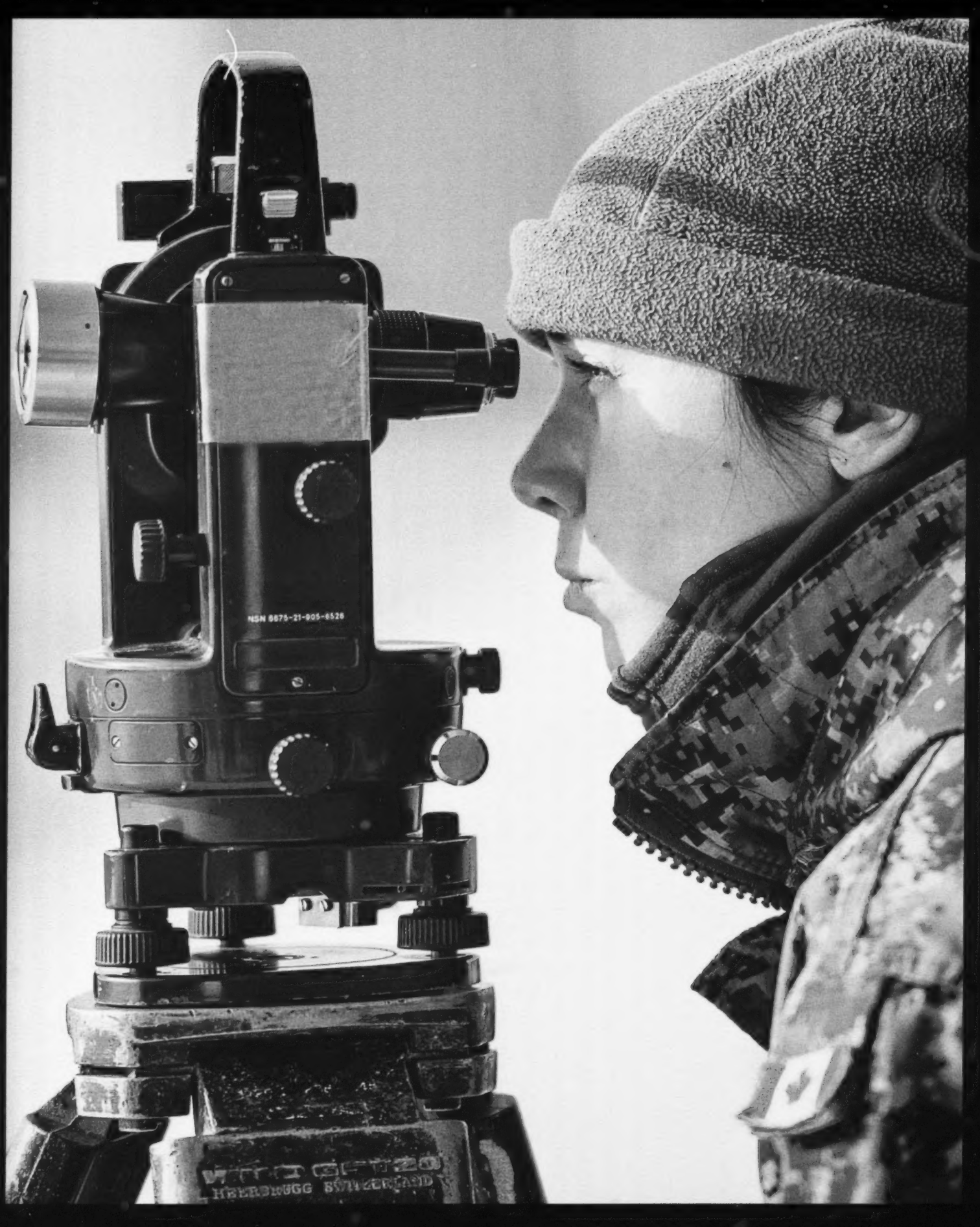
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MESSAGE FROM THE MINISTER OF NATIONAL DEFENCE

I am pleased to release the Defence Investment Plan. The plan sets out the key equipment, infrastructure, and services investments required to deliver Canada's defence policy vision — a vision in which Canada is Strong at home, Secure in North America, and Engaged in the world.

At its core, Canada's defence policy is about caring for the women and men of the Canadian Armed Forces (CAF). This includes providing them with the right equipment to do their jobs effectively. It is why the Government of Canada made a significant, long-term investment in the capabilities that our military needs to carry out current and future operations.

To forecast how much it would cost to implement the defence policy over its 20-year horizon, we conducted a rigorous exercise with external accounting firms. We also recognized that, no matter how realistic and credible our costing forecasts, a 20-year policy needs to have the flexibility to adjust to changes in major capital projects. Adjusting these cost forecasts over time is done through the investment planning process.

The Investment Plan provides important direction to guide how Defence funding is managed and spent. It includes all approved capital projects under Canada's defence policy. It will be refreshed annually and approved by the Treasury Board every three years. This will help Canadians understand how the Defence budget is changing and why these changes will help the CAF succeed.

This Plan delivers on our commitment in *Strong, Secure, Engaged* to provide Canadians with greater transparency on defence spending. It gives industry more information on our government's defence investments in order to provide the equipment and infrastructure our women and men in uniform need to do their jobs.

Yours sincerely,

The Honourable Harjit S. Sajjan PC, OMM, MSM, CD, MP
Minister of National Defence

MESSAGE FROM THE DEPUTY MINISTER OF NATIONAL DEFENCE AND THE CHIEF OF DEFENCE STAFF

Last year, the Government of Canada issued Canada's defence policy, *Strong, Secure, Engaged*. This policy supports a healthy, highly motivated, and skilled military force of soldiers, sailors, airmen, and airwomen who are ready and able to defend Canada and Canadian interests at home and abroad.

The policy also provides for the necessary investments to guarantee and enhance the capabilities and capacity of the Department of National Defence and the Canadian Armed Forces over the coming decades. It is a vision the Defence Team is fully engaged in realizing.

For the very first time, Canadians have a first-hand look at how the funds to deliver this policy will be used, and a view of how Defence is planning these investments. This is a significant improvement in the transparency of the defence budget, and gives Canadian taxpayers the opportunity to see for themselves that their investments in Canada's defence and security are being well spent. It is a rigorously costed policy, to ensure the Canadian Armed Forces' requirements will be met, and the proud women and men who serve in our Forces will succeed in their missions.

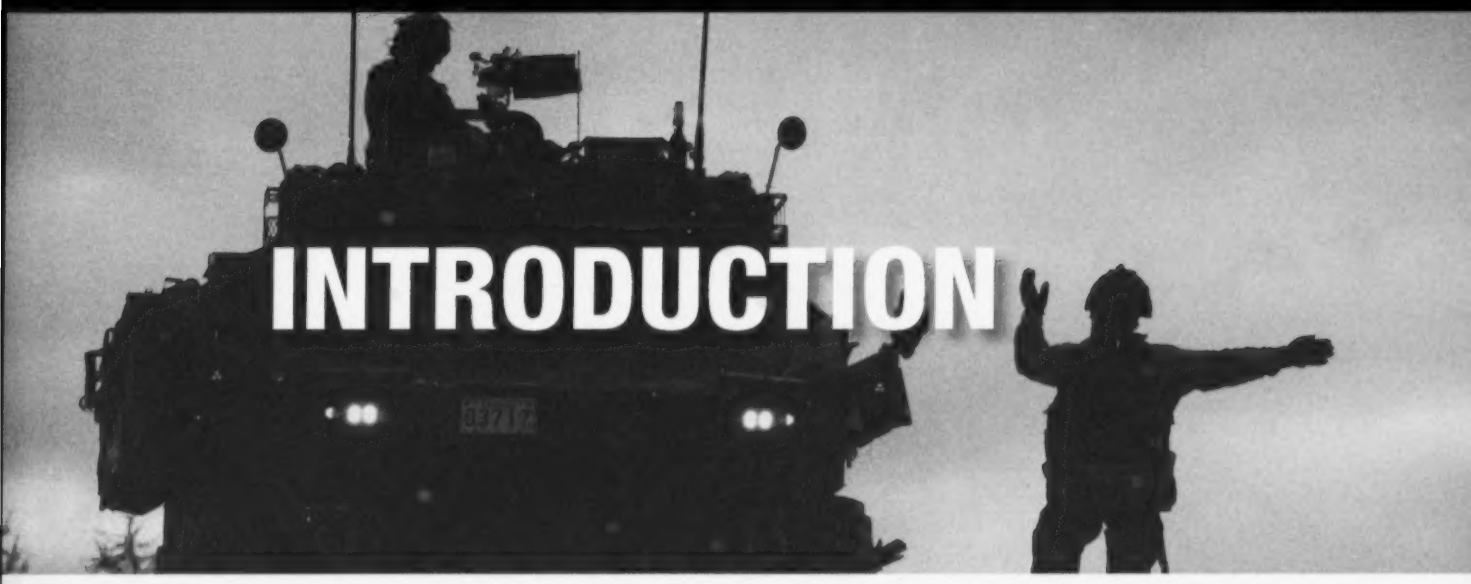
As promised in *Strong, Secure, Engaged*, Defence Investment Plan 2018 includes capital projects over $5 million as well as services contracts over $20 million. It also incorporates information about the long-range spending plans of National Defence, which were previously provided in the Defence Acquisition Guide, and are now available in the online Defence Capabilities Blueprint. With more and easier access to information, businesses will be able to make informed investments in research and development, and strategic partnership decisions based on the Canadian Armed Forces' anticipated needs.

This plan also provides crucial planning direction to guide the major investments that will strengthen the Forces' ability to carry out its mandate, and improve the Department's ability to deliver affordable programs while ensuring valuable resources are focused on vital initiatives that protect Canada and Canadians.

This carefully crafted and comprehensive investment plan will ensure the Canadian Armed Forces remain ready and able to take on the missions the Government of Canada asks of it, and has the necessary resources to get the job done, whatever the assignment.

Jody Thomas
Deputy Minister
Department of National Defence

General Jonathan Vance
Chief of the Defence Staff



INTRODUCTION

At any given time, the Government of Canada can call on the Canadian Armed Forces to undertake missions to protect Canada and Canadians and to maintain international peace and stability. It will often call upon the Forces to deploy on multiple operations simultaneously.

Defence Investment Plan 2018 outlines how the Royal Canadian Navy, the Canadian Army, the Royal Canadian Air Force and the Canadian Special Operations Forces Command will be funded in the coming decades to ensure the Canadian Armed Forces is well equipped and well supported to carry out whatever missions are assigned by the Government. It also explains the policy context behind funding decisions made by the Defence Team, an integrated unit composed of Canadian Armed Forces personnel and Department of National Defence civilian employees.

Defence Investment Plan 2018 offers Canadians an unprecedented perspective on hundreds of projects and contracts—for capital equipment, infrastructure investments, and services—that will enable the Forces to keep Canadians safe and to support our allies and partners abroad.

This document is meant to inform Canada's defence and security industries of future investment opportunities that will generate jobs and economic growth across the country. It will also be of interest to parliamentarians, academics and engaged Canadians seeking accountability for the use of federal tax dollars, as it demonstrates National Defence's commitment to affordability and effective resource management.

Defence Investment Plan 2018 includes funded projects outlined in *Strong, Secure, Engaged*. As part of modern military planning, Defence continuously examines the future security environment and identifies capability requirements to ensure the Canadian Armed Forces is properly positioned to meet Canada's defence needs. This includes keeping pace with new technologies, and ensuring old and new systems can work together. The Forces also ensures its equipment remains compatible with other nations with whom Canada's military personnel work.

The Canadian Armed Forces is taking a number of concrete steps to improve its ability to anticipate threats, challenges and opportunities. For example, the expansion of CAF space and cyber capabilities is a priority. The CAF is also enhancing intelligence collection, analysis and fusion capabilities, and supporting and leveraging the expertise of Canada's defence and security academic community. New ideas are being supported through investment in research and flexible procurement arrangements. This will allow Defence to test new products to meet evolving capability needs. Future capabilities and projects will only be added to the Investment Plan when they have been fully assessed and funded.

However, Defence Investment Plan 2018 is much more than numbers and sound accounting methods. It is testament to the determination of National Defence to enhance the Canadian Armed Forces' capabilities and capacity to achieve excellence across the entire spectrum of military operations as our Forces personnel protect Canada and its sovereignty.

PART I

1.1 *STRONG, SECURE, ENGAGED*: CANADA'S DEFENCE POLICY

The strategic context in which the Canadian Armed Forces operates has shifted dramatically over the last decade or more—driven by an evolving balance of power, the changing nature of conflict, and the rapid evolution of technology. These new challenges demand a new response in the way the Forces operates and is funded.

In 2016, National Defence set out to determine how best to confront threats and challenges in the years ahead. As part of this comprehensive review, the Defence Team turned for input to parliamentarians from all parties, to industry, academia, partners, allies, and interested Canadians through unprecedented consultations. Nine roundtables were held across the country, including discussions dedicated to industry and innovation, gender perspectives, and Indigenous issues. As well, over 20,000 Canadians provided their feedback on the defence policy review through an online portal.

Following this fulsome engagement exercise and guided by an independent Minister's Advisory Panel, the Government of Canada released *Strong, Secure, Engaged*: Canada's Defence Policy in June 2017.

This policy outlines Canada's defence priorities for the coming 20 years and provides the funding necessary to meet Canada's defence needs now and into the future. It articulates how the Government of Canada will support and employ the Canadian Armed Forces to defend domestic interests and contribute to a more secure and peaceful world.

Strong, Secure, Engaged provides a bold new vision to defence that will make Canada:

A NEW CANADIAN APPROACH TO DEFENCE

Strong, Secure, Engaged **will make Canada more secure and add value to Defence's contributions to global security by enabling the Canadian Armed Forces to:**

ANTICIPATE and better understand potential threats to Canada and Canadian interests so as to enhance our ability to identify, prevent or prepare for, and respond to a wide range of contingencies;

ADAPT proactively to emerging challenges by harnessing new technologies, fostering a resilient workforce, and leveraging innovation, knowledge, and new ways of doing business

ACT with decisive military capability across the spectrum of operations to defend Canada, protect Canadian interests and values, and contribute to global stability.

- ***Strong at home***, its sovereignty well defended by a Canadian Armed Forces also ready to assist in times of natural disasters, other emergencies, and search and rescue
- ***Secure in North America***, active in a renewed defence partnership in NORAD and with the United States
- ***Engaged in the world***, with the Canadian Armed Forces doing its part in Canadian contributions to a more stable, peaceful world, including through peace support operations and peacekeeping

Central to achieving this vision is the ability to anticipate new challenges, *adapt* to changing circumstances, and act decisively with effective military capability. In turn, this demands that Canada has an agile, multi-purpose, combat-ready military that is operated by highly-trained, well-equipped, and professional personnel. Given the uncertainty and complexity of the global security environment, now and into the future, a flexible and versatile Force that can take informed, decisive action to accomplish the Government's objectives is essential to the military's operational effectiveness and long-term success.

Strong, Secure, Engaged focuses on defence priority areas, which are reflected and reinforced in the Department of National Defence and the Canadian Armed Forces 2018-19 Departmental Plan.

These include:

- Fostering well-supported, diverse, and resilient people and families with a wide range of initiatives that transform how personnel are cared for and supported—from recruitment through transition to post-military life. Canada cannot meet its defence needs without dedicated, motivated, and highly skilled people. National Defence will implement concrete actions that ensure personnel and their families are well supported and resilient: physically, psychologically, and socially.
- Growing and enhancing Canadian Armed Forces capability and capacity by providing the Defence Team with the training and skills required to do the difficult and complex work asked of them. Under *Strong, Secure, Engaged*, the Regular Force will grow by 3,500 to 71,500 members and the Reserves will increase by 1,500 to 30,000 members. In addition, Defence will align its strategic and operational plans to ensure the Canadian Armed Forces is able to conduct the full range of operations, whether it is helping Canadians in times of need or making meaningful contributions to international peace and security.
- Exploiting defence innovation by ensuring that the Defence Team can tap into creativity and expertise available outside of government. It will compete for the best research, technology, and new ways of doing things to take advantage of the most ground-breaking concepts generated by academics, universities, and the private sector. *Strong, Secure, Engaged* commits to innovation and research in emerging domains as well as investment in critical areas such as intelligence.
- Modernizing the business of Defence by continuously improving the way the Defence Team works—streamlining the procurement process, adopting innovative ways of delivering critical infrastructure services, and working as efficiently and effectively as possible to deliver results.

  It also means being a responsible steward of the environment by reducing the environmental footprint of National Defence, minimizing the impact of its activities on the natural environment, and managing resources responsibly.

To advance these priorities, Canada's defence policy has assigned significant financial resources and commits to greater openness regarding how Defence investments are managed, to make sure the additional resources provided will achieve the expected results. Increased transparency through regular reporting on major investments will strengthen Canadians' confidence that their tax dollars are well spent and that members of Canada's military have the tools and resources they require to do their jobs.

This first Defence Investment Plan under the new policy delivers on this commitment, providing financial details about the capital equipment and infrastructure projects over $5 million as well as support contracts above $20 million expected to begin in the coming years that the Canadian Armed Forces will require to conduct its missions over the next two decades.

1.2 DEFENCE INVESTMENT PLAN 2018

National Defence has always placed a premium on capability planning and has consistently applied best practices to make sure the Canadian Armed Forces has the capabilities and resources required to fulfill

its engagements. Now, Defence Investment Plan 2018 raises the bar—both in its strategic approach to investing and its transparency.

This first investment plan ever to be made public by National Defence is the product of the most diligently costed defence policy in Canada's history. The Defence Team worked with external global defence costing experts who brought their expertise in the defence and security domain, gained from defence reviews in allied nations, to support this process. In addition, the costing methodologies used to confirm the *Strong, Secure, Engaged* vision underwent a third-party review conducted by five external accounting firms.

The Defence Investment Plan is driven by our assessment of the security environment and the capital investments necessary to fulfill future Canadian Armed Forces missions while ensuring their affordability, as laid out in *Strong, Secure, Engaged*.

Defence Investment Plan 2018 is based on the technical plan which has been submitted to and approved by the Treasury Board of Canada. The information in the technical plan has been condensed into a more digestible and accessible product with a new online tool that provides industry with access to information about defence investment opportunities. This meets the defence policy commitment to demonstrate transparency and accountability while respecting the department's requirement to protect commercially sensitive material. In this easy-to-use format, time-saving searches for up-to-date information on projects can be conducted and sorted using a variety of criteria.

The Investment Plan distributed to the public will be refreshed annually and reset every three years, following approval of the technical Investment plan by the Treasury Board. Canadians will now be able to understand how defence funds are being spent and the Defence Team will have the necessary flexibility to prioritize important investments that empower the Canadian Armed Forces to defend Canada and contribute to a safer, more prosperous world.

Strong, Secure, Engaged identified projects and outlined capital spending totaling $108 billion on an accrual basis ($164 billion on a cash basis), along with operating expenditures of $283.7 billion and sustainment expenditures of roughly $105.4 billion over 20 years. Defence Investment Plan 2018 illustrates these monies will be put to work over the duration of the policy.

Table 1: Total Approved *Strong, Secure, Engaged* Investments 2017-18 through 2036-37 on an Accrual Basis ($millions)

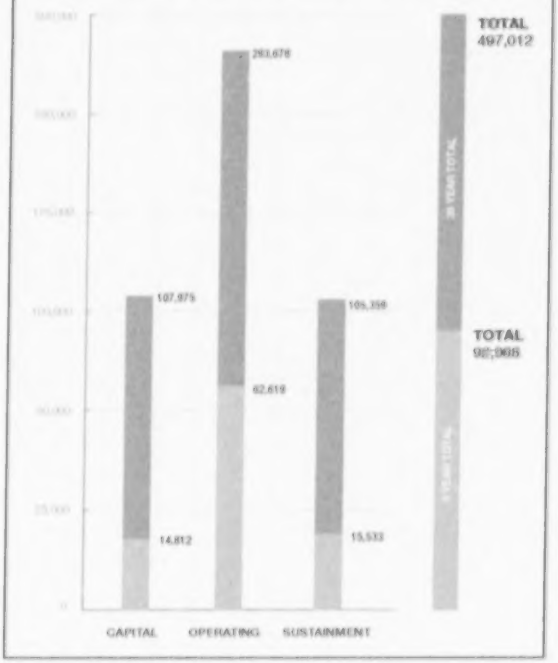
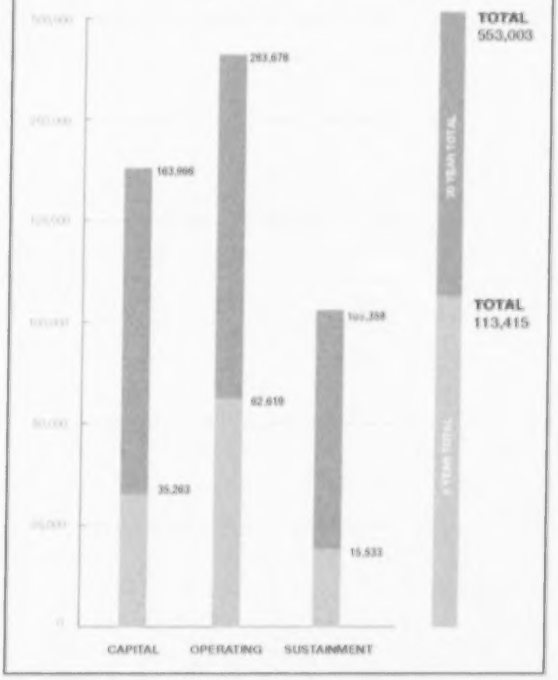


Table 2: Total Cash Requirements for *Strong, Secure, Engaged* Investments 2017-18 through 2036-37 ($millions)



Defence Investment Plan 2018 is not a policy document, as its underlying policy is *Strong, Secure, Engaged*. Neither is it an operational planning report, since it does not specify the precise timing of future Treasury Board approvals or contracting processes.

Defence Investment Plan 2018's primary purpose is to inform Canadians, parliamentarians, industry, defence experts, media and academics, but it will be an equally useful resource within National Defence. The Defence Team now has a financially focused structure that provides accurate and timely information for decision makers, so that the Canadian Armed Forces can satisfactorily deliver its mandate. This will facilitate planning surrounding the complex investment, capability, and fiscal considerations required to implement Canada's defence commitments.

1.2.1. CAPITAL INVESTMENT FUND

Historically, different parts of the defence budget were managed according to differing rules, which made it difficult to spend all the money earmarked for National Defence. This approach also posed problems in managing the funding of complex, multi-year projects with long lead times and made it challenging to report to parliamentarians and Canadians.

Strong, Secure, Engaged identified National Defence needs and the many forces at play driving these requirements. It also provided National Defence with realistic and predictable funding of $213 billion—the sum of $108 billion for capital acquisitions from the Capital Investment Fund (commonly referred to as accrual space – see Table 1) and $105.4 billion for sustainment costs funded from reference level.

FULL LIFE CYCLE APPROACH

National Defence will complete a life-cycle cost estimate for all new major capital projects prior to their acquisition. This requires Defence to estimate all costs over the entire useful life of a capital asset; in some cases, this can be 50 years or more. In completing a life-cycle cost estimate, Defence must forecast four types of costs: project development and acquisition, operating, sustainment and disposal.

ACCRUAL BASIS:

costs of acquiring an asset are spread over its useful life, not just at the time that bills are paid

CASH BASIS:

costs for the acquisition of capital assets and associated operating costs are booked immediately in the year the cash disbursement is made

Strong, Secure, Engaged fully funded the estimated demand for both capital and operating funding to cover defence spending over this timeframe.

National Defence plans its capital expenditures over the life of its assets. Since most of the major capital investments are made over multiple years, the department needs to secure government funding that reflects the full lifetime costs of projects.

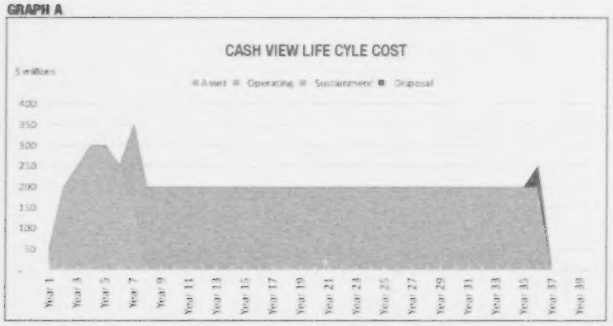
Strong, Secure, Engaged introduced a new funding mechanism by securing the money needed for investments in the fiscal framework for the next 20 years ($108 billion). This funding envelope, the Capital Investment Fund, represents the ceiling for planned capital asset investments over the period on an accrual basis. In other words, the amortized cost of defence capital assets required over the next two decades is capped at $108 billion.

The new funding mechanism also identifies the amount of cash funding that DND will require to acquire capital assets. DND expects to spend $164 billion in capital investments over the next 20 years.

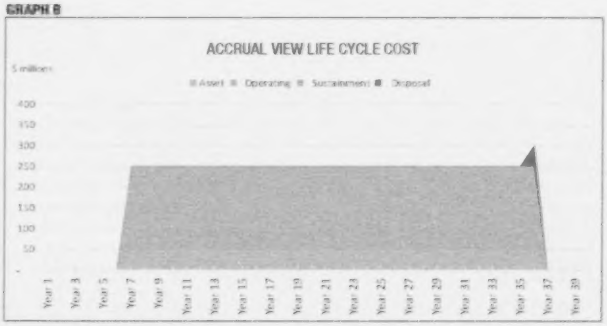
Accrual accounting better reflects actual fiscal impacts over time. However, reporting on a cash basis gives parliamentarians, industry, and other stakeholders a clearer sense as to the timing and estimated amounts of acquisitions outlined in IP 2018. This is a much shorter timeframe than the amortization costs to be spread over the 20-year timeframe covered by *Strong, Secure, Engaged*.

National Defence plans it capital investments on an accrual basis, however its year-to-year funding is managed on a cash basis. As an example, Graphs A and B below illustrate the procurement of an asset with a useful life of 30 years at a total cost of $7.6 billion, reflecting both the accrual and cash views of the expenditure.

GRAPH A

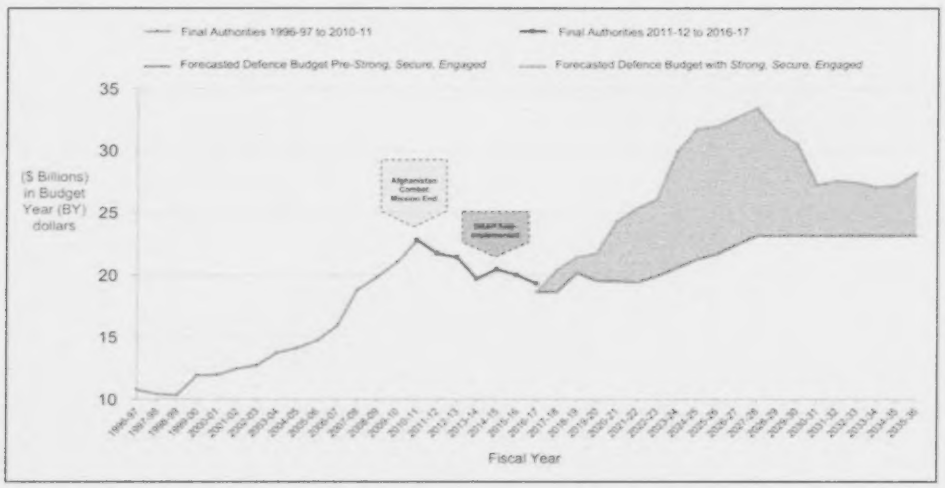


GRAPH B



Strong, Secure, Engaged will grow annual cash defence spending from $18.9 billion in 2016-17 to $32.7 billion in 2026-27. Total defence spending over 20 years will be $553 billion on a cash basis. This will enable National Defence to increase the size of the Canadian Armed Forces, affirm Canada's unwavering commitment to its longstanding alliances and partnerships, and provide vital new investments to make sure that women and men in uniform have the modern tools and facilities they need to succeed in their operations.

The figure below depicts DND appropriations over a 40-year span to demonstrate the 70% increase in cash commitments pledged in *Strong, Secure, Engaged* during the next two decades. This figure highlights the *total* defence budget, not just capital investments.



1.2.2. DEFENCE CAPABILITIES BLUEPRINT

Defence Investment Plan 2018 is an overview of the Defence Team's planned expenditures during the 20-year timeframe of *Strong, Secure, Engaged*. A new online tool, the Defence Capabilities Blueprint, provides industry with access to information about defence investment opportunities.

Like the previous Defence Acquisition Guide, the Defence Capabilities Blueprint outlines planning information such as funding ranges and project timelines but goes further to offer improved access to the full spectrum of investment areas of interest to National Defence. The cost ranges identified in the Defence Capabilities Blueprint are based on the acquisition costs for projects. These costs include project management costs, infrastructure, contracts and contingency. The Defence Capabilities Blueprint provides details about 200+ projects funded under *Strong, Secure, Engaged*, including capital equipment and infrastructure projects over $5 million and support contracts valued over $20 million that are expected to be awarded in the coming years.

With this information, industry will be able to make informed research and development and strategic partnering decisions based on the projected needs of the Canadian Armed Forces, enabling the defence and aerospace sectors to plan for and compete in defence procurement opportunities.

What's new?

The Defence Capabilities Blueprint was designed to allow searches among the projects and services using a number of different parameters:

Defence Capability Areas (DCAs) are 13 broad component categories, such as Land, Sea, Air, Space, and Cyber. These categories are further comprised of smaller constituent components of more than 150 Defence Capability Investment Areas (DCIAs). Examples of DCIAs are commercial pattern vehicles, ship parts and components, or avionics. Projects may include more than one DCA and several DCIAs.

Compared to the Defence Acquisition Guide, the inclusion of infrastructure projects over $5 million is a new feature of the Defence Capabilities Blueprint.

Activities are also searchable under Innovation, Science and Economic Development Canada's Key Industrial Capabilities (KICs). These capability areas inform industry about which key business activities are government priorities in defence procurement. KICs are significant factors in the design, rating, and weighting of Value Propositions.

Project Sponsors are the service command level or civilian equivalent organizations within National Defence. These are the Royal Canadian Navy, Canadian Army, Royal Canadian Air Force, Canadian Special Operations Forces Command, Assistant Deputy Minister (Material), Assistant Deputy Minister (Information Management), Assistant Deputy Minister (Infrastructure & Environment), and Assistant Deputy Minister (Science & Technology).

Lastly, there is an 'Advanced Search' function that allows users to filter their searches to specific information such as select funding ranges, capability areas (DCAs/DCIAs/KICs), or project phases and dates.

DEFENCE CAPABILITIES BLUEPRINT

Includes:

- Projects: Capital equipment and infrastructure projects with a value over $5 million that are planned and funded under *Strong, Secure, Engaged.*
- Support Contracts: In-service support and professional services contracts with an expected value greater than $20 million that will be awarded in the coming years to support the capabilities being delivered under *Strong, Secure, Engaged.*

Features a keyword search function, and segments investment opportunities into searchable components by:

- Defence Capability Areas
- Defence Capability Investment Areas
- Project Sponsors
- Key Industrial Capabilities

1.3 INVESTING IN CANADA'S DEFENCE: ENSURING CAPABILITY AND CAPACITY

Strong, Secure, Engaged consists of 281 projects previously approved in Defence Investment Plan 2014 and 52 new projects for a total of $108 billion. Defence Investment Plan 2018 lists the 200+ capital equipment and infrastructure projects over $5 million and support contracts valued over $20 million that are expected to be awarded in the coming years. The difference in the number of projects shown in these documents is explained by the fact that Defence Investment Plan 2018 does not include completed projects, and service contracts that have been either awarded, or are already underway.

As future capabilities are developed and investment projects put forward, they undergo a stringent governance review in order to select the best solutions for National Defence, review costing, and provide oversight on project delivery and management.

The new defence policy integrates additional funding flexibilities with respect to mission costs. While some operations can be managed from within the existing defence budget, for others National Defence will seek additional funding. This will help preserve the integrity of the defence budget and ensure that other important priorities, such as investments in defence capabilities and caring for and supporting Canadian Armed Forces personnel and their families, are not compromised by the costs of operations.

1.3.1. THE CASE FOR INVESTMENT

Today's highly complex and unpredictable security environment underlines the need to arm the Canadian Armed Forces with the best available tools and resources. The Canadian Armed Forces needs to develop sophisticated awareness of its operating environment to better predict and respond to crises, such as increasingly severe natural disasters at home. It must be ready to address threats stemming from the actions of violent extremist organizations, from within North America and beyond. Growing threats in the cyber domain also demand robust capacity. All these forces affecting Canadian Armed Forces operations require that military personnel are properly equipped and empowered to succeed in their missions, both domestically and abroad.

The Defence Team must have next generation technologies and modern methods to boost its surveillance and reconnaissance capacity and to maximize its defence intelligence expertise. It is particularly vital that the Canadian Armed Forces has the necessary advanced capabilities to work side by side with its allies in NORAD, NATO, and Five Eyes partners (Australia, Canada, New Zealand, the United Kingdom, and the United States) to stay ahead of global adversaries.

Preparing for the fluid environment confronting Canadian service women and men is one crucial element of the Forces' operational success. It is equally essential that they be ready to act decisively, in multiple theatres, when called on by the Government of Canada.

Strong, Secure, Engaged identified priority areas for increased defence spending over the immediate and longer term to rebuild the Forces' core capabilities; increase emerging capabilities in cyber, space, and remotely piloted vehicles; and enhance intelligence, satellite communications, surveillance, and logistics activities. It also recognized the need to reinvest in defence infrastructure.

PART II

2.1 TRANSORMING THE WAY NATIONAL DEFENCE WORKS

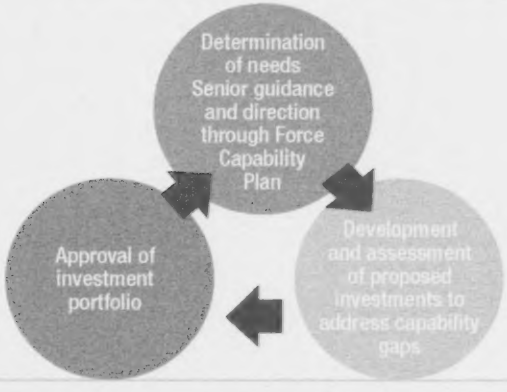
In developing Defence Investment Plan 2018, the Defence Team stepped back to determine not only what it could do better but also what it should do differently. IP 2018 formalizes some important changes to how investments are approved and governed that have been implemented since Defence Investment Plan 2014.

Decisions under the plan are supported by strong, risk-informed, and streamlined governance. The improved governance framework was implemented to ensure that the Defence Team has the flexibility to effectively manage the investments required to meet defence priorities and deliver its programs.

2.1.1. PROJECT PLANNING

The Defence Team's planning decisions are based on the Canadian Armed Forces' capability requirements. Investments made are designed to ensure that Forces personnel will have the right infrastructure and equipment required to do their jobs.

The investment planning cycle is illustrated below.


Determination of needs Senior guidance and direction through Force Capability Plan
Development and assessment of proposed investments to address capability gaps
Approval of investment portfolio

A further enhancement is the Project Approval Process Review for low-complexity projects, which previously consumed a high level of resources that was not in alignment with their level of risk. The review process is reducing internal Defence project development and approval time by at least 50% for straightforward projects through improved internal communication, increased delegation, and more efficient departmental approval processes.

2.1.2. PROJECT SELECTION

Managing investments is a continuous process, subject to revision as capital project costs mature and implementation schedules change, as new requirements and opportunities arise, or as government operational priorities are adjusted. Whatever the scenario, projects proposed for Defence funding are assessed under the Capital Investment Program Plan Review (CIPPR).

CIPPR, an analytical tool developed by the Chief of Force Development organization with significant support from Defence Research and Development Canada, has already demonstrated many benefits. In a programming context, for instance, it provides business analytics decision support and advice to senior Defence leaders to inform capability investment and trade-off decisions. In turn, this confirms that the Defence Team is advancing the right priorities, with a watchful eye towards cost, scope, and schedule risks. As well, if previously approved plans are changed, CIPPR informs decisions regarding re-balancing the investment portfolio to minimize any disruption to capability while respecting fiscal constraints.

As part of broader efforts to improve procurement, the Independent Review Panel for Defence Acquisition (IRPDA) was established in 2015 to provide arm's length oversight of major defence projects valued over $100 million. Its mandate is to validate the requirements for major military procurement projects by providing independent advice to the Minister and Deputy Minister of National Defence prior to seeking Treasury Board approval or the Minister exercising expenditure authority.

2.1.3. PROJECT COSTING

The Centre for Costing in Defence was created within National Defence to improve the timeliness and quality of costing information for decision-making. It is responsible for producing life cycle cost estimates for projects over $5 million, as well as implementing leading and best practices in costing in Defence. The organization has two groups: one produces cost estimates, the other conducts cost analytics.

When determining a project's cost, the Centre creates a point estimate based on a set of assumptions associated with the project. It then does a risk and sensitivity assessment to see what happens to the cost estimate when the underlying assumptions are changed for varying circumstances. The point estimate accounts for all sorts of potential risks, including schedule slippage, foreign currency fluctuation, general inflation in the economy, design changes, and so on.

A robust training program, the International Cost Estimating and Analysis Association certification program, has been instituted for cost estimating specialists. This will result in a significant professionalization of costing capability and capacity to ensure lifecycle cost estimates are based on the latest international body of knowledge and completed in accordance with Treasury Board guidelines.

2.1.4. PROJECT APPROVAL

Oversight of capital projects has undergone a substantive transformation to build on best practices and to operationalize the exhaustive costing practices that validated *Strong, Secure, Engaged*. The overhaul of internal approval procedures also delivers on the policy's commitment to increase accountability to the public for the expenditure of Canadians' tax dollars.

Projects under $5 million continue to be completed rapidly through governance mechanisms within senior command and assistant deputy minister level organizations. These authorities, which have existed for many years, enable low-cost projects to be finalized expeditiously. When making investment decisions about projects valued above $5 million, a stringent approval process is applied.

The first governance body for all capability projects over $5 million is the Defence Capabilities Board (DCB). The Board oversees the Identification and Options Analysis phases and endorses project progression into definition. Projects valued over $100 million must undergo additional, third-party reviews by the Independent Review Panel for Defence Acquisition. The Panel reviews and challenges the mandatory requirements of major projects as well as the rationale for the section of the preferred option, basing its assessment on existing project documentation such as the business case analysis and the preliminary statement of operational requirements. The next governance level is the Program Management Board (PMB). The Board evaluates all project proposals in excess of $5 million to recommend the expenditure of capital funds by capital projects through definition and implementation. The PMB is co-chaired by the Senior Associate Deputy Minister, the Vice Chief of the Defence Staff, and the Chief Financial Officer.

The final governance body within National Defence is the Investment and Resource Management Committee (IRMC). Chaired by the Deputy Minister, IRMC is responsible for the effective allocation and management of financial resources and granting departmental approval of funding for capital projects over $50 million.

The committees that oversee National Defence investment planning decisions are depicted below.

TREASURY BOARD
MINISTER
DEPUTY MINISTER
Investment and Resource Management Committee (IRMC)
Grants departmental allocation authority for projects above $60M
(The DM has been delegated project and expenditure authority for construction projects below $25 M)
Program Management Board (PMB)
Grants departmental allocation authority for projects up to $50M and endorses projects above $50M
Defence Capabilities Board (DCB)
Endorses capability requirements for all projects above $5M
Canadian Armed Forces Commands and Department of National Defence Assistant Deputy Minister Level Organizations
Approve and fund proposals for capital projects up to $5M
(ADM(IE) has been delegated projects and expenditure authority for construction projects below $15M)

PROJECT AUTHORITY APPROVAL LEVELS FOR CAPITAL PROJECTS

2.1.5. PROJECT GOVERNANCE

Life-cycle costing significantly influences investment project approval thresholds, necessitating improvements to governance to ensure the sustainment and affordability of current and future obligations.

Beyond the oversight provided by the committees that approve project funding, the Defence Team has adopted a performance measurement framework to quantify key outputs and performance indicators for annual investment planning. Among the variables being tracked, the framework assesses whether risk-related governance processes will burden the approval process, if new investments have sufficient funding prior to approval, if information systems are in place to support investment planning, and whether the Defence Team has the capacity to deliver priority investments. This comprehensive framework provides senior executives with an objective view of both planning and implementation processes.

Equally rigorous is the governance practiced in the award and management of the sustainment and operating contracts that follow formal commissioning processes. The National Procurement Oversight Committee provides strategic advice and makes recommendations on equipment sustainment activities and priorities, facilitates their implementation, and resolves issues related to national procurement management. Specific to infrastructure investments, the Integrated Project Delivery method amalgamates people, systems, business structures, and practices to harness the talents and insights of all participants to reduce waste and optimize efficiency through all phases of design, fabrication, and construction.

MANAGING RISKS

A critical aspect of project governance is the assurance that risks have been fully assessed and mitigated. Of course, it is impossible to eliminate all risk; however, most risks can be avoided or mitigated. Defence Investment Plan 2018 includes sufficient flexibility and an appropriately responsive governance system, ensuring that risks should be manageable:

- **National Defence investment governance has matured and strengthened significantly since previous investment plans, including leveraging business intelligence and business analytics**
- **Acquired goods and services have been mapped for current and future expenditures**
- **National Defence's Centre for Costing in Defence is now involved earlier in the planning process, improving the timing and quality of costing provided for decision making**
- **The Defence Team is growing and professionalizing the defence procurement workforce to strengthen its capacity to manage the acquisition and support of today's complex military capabilities, including the addition of procurement specialists, enhanced staff training, and professional accreditation of defence procurement personnel**

2.2 MAXIMIZING DEFENCE'S SUCCESS

The Defence Team's new way of doing business extends beyond how money will be managed and spent over the coming years. National Defence is approaching investment planning in ways that will both build on the best of past practices and embrace new directions to serve the needs of all Canadians. The following section highlights some of the driving forces that will be factored into future investment decisions.

2.2.1 CAPITALIZING ON INNOVATION

Budget 2018: Equality and Growth for a Strong Middle Class reinforced that Canada's security and prosperity remain the Government of Canada's primary strategic interests. Budget 2018 builds on the Innovation and Skills Plan to re-tool Canada's innovation programs, rules, and regulations to better support Canada's innovation community. In addition to making programs easier to access and use, the Government is expanding support for Canadian companies that want to scale up and take their innovations to markets around the world.

As *Strong, Secure, Engaged* makes clear, problem solving, creativity, and knowledge are critical to meet and mitigate evolving defence and security threats. National Defence must foster innovation, exploit research and development, and collaborate across the public and private sectors. New tools that provide awareness of the shifting Canadian Armed Forces operating environment as well as the human dimensions of conflict to better predict and react to crises are essential to success in the changing global environment. Close cooperation between the Forces and the private sector is key to ensuring the Forces has access to advanced technologies and innovations that enable Canada to keep pace with its allies and a step ahead of its adversaries.

Strong, Secure, Engaged introduced the Innovation for Defence Excellence and Security (IDEaS) program, which will help make this happen. IDEaS was officially launched and issued its inaugural public call for proposals in April 2018. This competitive process consists of 16 defence and security challenges in many defence and security domains. With eight program elements under IDEaS, additional opportunities will be announced regularly. Since the program launch, the IDEaS team has been engaging key audiences virtually and in-person to reach the broadest range of representation from across Canada's innovation community. This includes chambers of commerce, academic institutions, industry associations, and more.

National Defence is investing $1.6 billion over 20 years in IDEaS to evolve and innovate its practices and capabilities to meet the demands of the challenging defence environment.

This will generate tremendous opportunities for businesses, large and small, providing them with export opportunities around the globe. In turn, this will lead to new jobs and economic benefits in Canadian communities from coast to coast to coast.

Through IDEaS, National Defence will reach out to Canada's most creative minds, whether they are inventors, academics in university labs, or scientists in small and major corporations. These innovative thinkers will have the opportunity to provide the Canadian Armed Forces and Canada's safety and security communities with unique solutions to today's challenges.

IDEaS will stimulate innovation through a range of activities including competitions, contests, innovations networks, and 'sandboxes' to field-test concepts. The potential for resulting economic spin-offs is enormous. Exceptional opportunities will be created in domains such as surveillance, cyber tools for defence, space, artificial intelligence, remotely piloted systems, data analytics, and human performance areas including cyber capabilities, the space domain, and remotely piloted land, sea, and aerial capabilities.

IDEaS will establish research clusters to stimulate the free flow of ideas that are vital to innovation. The clusters will bring together industry, academics, and other partners to form collaborative innovation networks.

Areas for advanced R&D include:

- **Surveillance**
- **Cyber tools for defence**
- **Space**
- **Alternative fuels**
- **Remotely piloted systems**
- **Data analytics**
- **Counter-improvised explosive device solutions**
- **Mental health**
- **Operational stress injuries**

2.2.2 OPTIMIZING PROCUREMENT

Strong, Secure, Engaged aims to deliver the right equipment to the Canadian Armed Forces in a timely manner, leverage these purchases to create jobs and growth, and simplify procurement processes. One of its key goals is to ensure Canadian industry is positioned to deliver equipment and services to the Canadian Armed Forces. Cooperation with the Canadian defence industry not only enhances the Forces' ability to deliver on its mandate with core military capability, but also provides Canadians with well-paying jobs. The defence sector employs more than 60,000 Canadians and contributes over $10 billion annually to Canada's gross domestic product (GDP). Canada's aerospace sector has spawned a further 208,000 jobs in the Canadian economy and contributes close to $28 billion to our GDP.

Strong, Secure, Engaged **incorporates a challenge function within National Defence that supports project review and resource allocation. This results in greater up-front clarity in the procurement process and helps to validate military requirements, enabling contract issues to be settled quickly.**

Strong, Secure, Engaged introduced measures to enhance the effective management of the defence budget and deliver on the government's commitment to openness and transparency. To better support Canadian industry, Budget 2018 established a new electronic procurement platform to help Canadian small and medium-sized companies better access opportunities to do business with departments and agencies by making opportunities easier to find, simpler to navigate, and faster to award.

Even though 90% of procurements are delivered within their planned scope and budget, National Defence acknowledges that the defence procurement system needs to reduce transaction times and costs to get the military the equipment it needs when it needs it, to provide value for money, and to ensure Canada derives reasonable economic benefits—all while respecting the imperatives of a global trading regime.

STRONG SECURE ENGAGED **PROCUREMENT INITIATIVES**

- **Reduce project development and approval time in the Department of National Defence by at least 50 percent for low-risk and low-complexity projects through improved internal coordination, increased delegation, and strengthened approval processes.**
- **Work with partners to increase the Department of National Defence's contracting authorities for goods up to $5 million by 2018, allowing over 80 percent of defence procurement contracts to be managed by Defence.**
- **Use procurement to incentivize Canadian research and development in important and emerging technological areas.**
- **Increase transparency and timeliness of communications to defence industry associations, including instituting meetings between the Department of National Defence and Canadian industry through the Defence Industry Advisory Group and other fora.**
- **Grow and professionalize the defence procurement workforce to strengthen the capacity to manage the acquisition and support of today's complex military capabilities.**
- **Provide Canadians with regular updates on major project and programs to increase transparency, communicate challenges, and measure performance, including publishing the Defence Investment Plan.**
- **Ensure that Canadian environmental standards are adhered to in all procurement projects.**

FLEXIBLE PROCUREMENT

The norm is competitive procurement, but there are occasions when the use of sole source procurement is both necessary and justified, such as in the case of some military equipment that must be interoperable with allies and procured using sole source procurement through foreign military sales programs. While National Defence will continue to rely primarily on competitive domestic procurement, flexibility is required in some instances to meet the Canadian Armed Forces' operational requirements.

Procurement is being accelerated within National Defence by eliminating half of the steps previously required for low-risk, low-complexity projects falling under the Project Approval Process Review.

To further assist the defence sector in accessing procurement opportunities, National Defence has regular engagement with industry on key procurement files to respond to questions and increase clarity.

Beyond National Defence, numerous players in Canada's defence procurement eco-system have a part to play in improving procurement results.

The Sustainment Initiative is an interdepartmental program which modernized DND's procurement approach to in-service support by balancing the four principles of sustainment: performance; flexibility; economic benefits; and value for money.

PSPC's Buyandsell the Government's open procurement information service, will continue to provide tender opportunities, lists of pre-qualified suppliers and contract awards, information about events for businesses, contacts, and the latest information on how to do business with the federal government.

National Defence works closely with Innovation, Science and Economic Development Canada (ISED), aligning its investments with the Government of Canada's Inclusive Innovation Agenda. The application of ISED's Industrial and Technology Benefits (ITB) Policy and the associated Value Proposition optimizes ancillary benefits of military procurement.

Under the ITB Policy, companies awarded defence procurement contracts are required to undertake business activities in Canada equal to the value of the contract. This helps to grow companies, encourage an entrepreneurial and creative society, take advantage of global scientific excellence, and establish preeminent research clusters. It also can lead to new global export markets for Canadian innovators and the broader commercialization of some products.

Collectively, these changes will fast-track the Defence Team's access to innovation, ensuring that Canada keeps pace with the rapid evolution of technology to eliminate or mitigate emerging threats and remains a step ahead of potential adversaries.

2.2.3. CENTRALIZED INFRASTRUCTURE OPERATIONS

The Defence Team has made progress in improving the operation of defence infrastructure by consolidating the portfolio to a single point of responsibility and accountability. In place since 2016, this system has created a holistic view of Defence's significant infrastructure holdings, reduced administrative burdens, increased efficiency, and enhanced responsiveness to operational needs.

Through centralization, National Defence has implemented a standardized and objective process for project development and implementation, concentrating real property management and construction program management within a single organization. As a result, the Defence Team is consolidating assets with a similar function and accelerating the disposal of underused buildings that do not meet its needs.

Defence also has completed the delivery of a modern real property portfolio information system, which is now used across the country to plan and manage the Defence real property portfolio. These efforts will help to reduce operating costs and liabilities while providing opportunities for Indigenous communities and local businesses to take part in construction contracts or demolition projects.

2.2.4. HELPING GOVERNMENT GO GREEN

The Federal Sustainable Development Strategy commits the Government of Canada to reduce greenhouse gas (GHG) emissions from federal departments by 40% from 2005 levels by 2030, excluding military fleets.

The Defence Team manages one of the largest and most complex infrastructure portfolios in the federal government, accounting for roughly 10% of the defence budget each year. Not surprisingly, given its size, National Defence is the single largest contributor to the federal GHG baseline. As such, it has a critical role to play in achieving the federal carbon reduction goal.

Strong, Secure, Engaged outlines the actions National Defence will take to lower its GHG emissions by 40%. The Defence Team is already moving to make this a reality. As one example, Budget 2018 announced that a project to refurbish the antiquated

heating plant infrastructure at Canadian Forces Base (CFB) Halifax will be expanded by rehabilitating attached buildings and distribution systems to reduce emissions by a further 20%. CFB Halifax represents 17% of DND's greenhouse gas emissions. A large part of these emissions come from older heating plants in need of modernization. The upgrades at the plant will reduce emissions by up to 7%, improve energy efficiency, and save on heating costs. Reducing the military's dependence on commercial energy sources also supports a more agile and secure military force.

Leadership in Energy and Environmental Design (LEED), is the world's most widely used green building rating system. LEED provides a framework to create healthy, highly efficient, and cost-saving green buildings. LEED certification is a globally recognized symbol of sustainability achievement.

Other greenhouse gas reduction plans include investing $225 million by 2020 in a broad range of infrastructure projects across Canada. Project examples include the construction of a new Canadian Special Operations Regiment complex at CFB Petawawa in Ontario that will be built to green infrastructure standards that meet Leadership in Energy and Environmental Design (LEED®) Silver standards, and a new academic pavilion at the Royal Military College at Saint-Jean Garrison, Quebec.

The greening of National Defence extends beyond buildings to include the greening of platforms. In addition to the benefits related to infrastructure improvements, the National Defence carbon footprint will be further reduced by transitioning 20% of non-military vehicle fleets to hybrid and electric by 2020, installing electric charging stations at new or retrofitted buildings for both personal and defence fleet vehicles, expanding energy performance contracts to achieve energy efficiencies on bases and

The 7,141-m2 health care facility will provide Canadian Armed Forces members with integrated medical, dental, physiotherapeutic, and mental health services at a single location. Valued at $48.2 million, the project is expected to generate over 110 jobs during the construction period and provide numerous economic opportunities for the local community. The three-storey, 18,000-m2 academic pavilion will welcome new recruits and officer candidates for basic training in modern facilities. New classrooms and a large, state-of-the-art drill hall will help train educated, agile, and highly-skilled military personnel. The estimated $77-million project is expected to generate 160 jobs over the construction period.

CAMP SUSTAIN

The Canadian Army is striving to reduce field camp fossil fuel consumption by 25-50%, water demand by 50-75%, and liquid and solid waste by 50-75%. No single technology can achieve such savings, but Camp Sustain is exploring how smart technologies can advance these goals. The project aims to improve energy efficiencies and reduce the environmental footprint of military bases and compounds in an operational environment. It is exploring the potential of power management systems (camp micro-grid), deployable renewable energy systems (solar, wind), energy storage (batteries, compressed air), deployable wastewater treatment plants, waste to energy systems (pyrolyser, gasifier), fuel efficient large power generators (variable speed generators), camp energy usage reduction systems (reefer solar shades, improved shelter insulations), improved camp heating and cooling systems, and energy capture systems (heat capture and reuse). The project complements the tactical 2kW to 60 kW generators provided by the Land Force Modern Power Source by providing a larger 100kW to 500kW operational power range. It will also provide a joint deployable waste water management capability capable of supporting a deployed joint task force during sustained expeditionary operations.

wings across the country, and examining alternative energy options for operations.

Supporting the next generation of military leaders through modern training facilities will enable them to perform throughout their careers, while a modernized health services infrastructure will provide them with first-class mental health, medical and dental care to enhance their wellbeing.

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2.2.5. INCLUSIVE WORKPLACE

While the Department of National Defence and the Canadian Armed Forces has always recognized the value-added of a diverse workforce, *Strong, Secure, Engaged* places an unprecedented focus on diversity and gender equality as a means of strengthening the operational force and positioning the Defence Team as a preferred employer.

Specifically, *Strong, Secure, Engaged* makes a firm and public commitment to the integration of gender-based analysis plus (GBA+) in all defence activities across the Canadian Armed Forces and the Department of National Defence. This includes recruitment, the design and implementation of programs and services that support its personnel, equipment procurement and operational planning, both domestically and internationally. The Department of National Defence is one of the first departments to publicly embrace GBA+ as a constructive analytical tool, and is working hard to ensure that the entire Defence Team is trained and has the tools it needs to effectively integrate gender and diversity perspectives in decision-making across all business lines.

A key step in this process – and a best practice recommended by Status of Women Canada – is the establishment of a joint responsibility centre mandated to provide defence-specific advice in the enhanced application of GBA+ analysis. Defence joint responsibility centre within Defence is composed of civilian and military offices that can offer tailored expertise, and a network of Champions for Gender and Diversity in Operations.

The "+" in GBA+ acknowledges that gender based analysis goes beyond biological (sex) and socio-cultural (gender) differences to consider intersecting factors such as race, ethnicity, age, disability, and sexual orientation. GBA+ supports better policy making, priority-setting, and decision making by helping the Defence Team understand the consequences that its policies and operations will have on the fullest extent of Canadian society and to better respond to the situations it encounters when involved in operations overseas.

National Defence is committed to increasing the number of women in the Canadian Armed Forces, and as part of Canada's future contribution to peace operations. Increasing the number of women in uniform involved in peace support operations leverages the high quality of our personnel to make a significant difference in the world. Women enhance the skill sets available within peace support operations. In particular, they can help facilitate access and support for local women.

As well, the Defence Team is placing a new focus on recruiting and retaining under-represented populations within the CAF, including, but not limited to, women, Indigenous peoples, and members of visible minorities.

As such, embracing GBA+ considerations across the full spectrum of work within DND/CAF, including the spending set out in this Investment Plan, is a means of honouring the Canadian ideals of diversity, respect, and inclusion.

PART III

3.1 PLANNED EXPENDITURES

Making targeted and strategic investments will enable the Canadian Armed Forces to function as a multi-purpose military that can deliver on all operations—from domestic humanitarian assistance and disaster response, to counter-terrorism and peace support operations, to high intensity combat operations.

By enhancing capabilities and capacity, National Defence will also ensure interoperability with key allies and partners through NORAD, NATO, and members of the Five Eyes community for effective joint and combined operations.

3.2 CANADIAN ARMED FORCES CAPITAL INVESTMENTS

More than 200 projects—found on the Defence Capabilities Blueprint are outlined in Defence Investment Plan 2018. These include projects already in progress and support contracts expected to begin in the coming years.

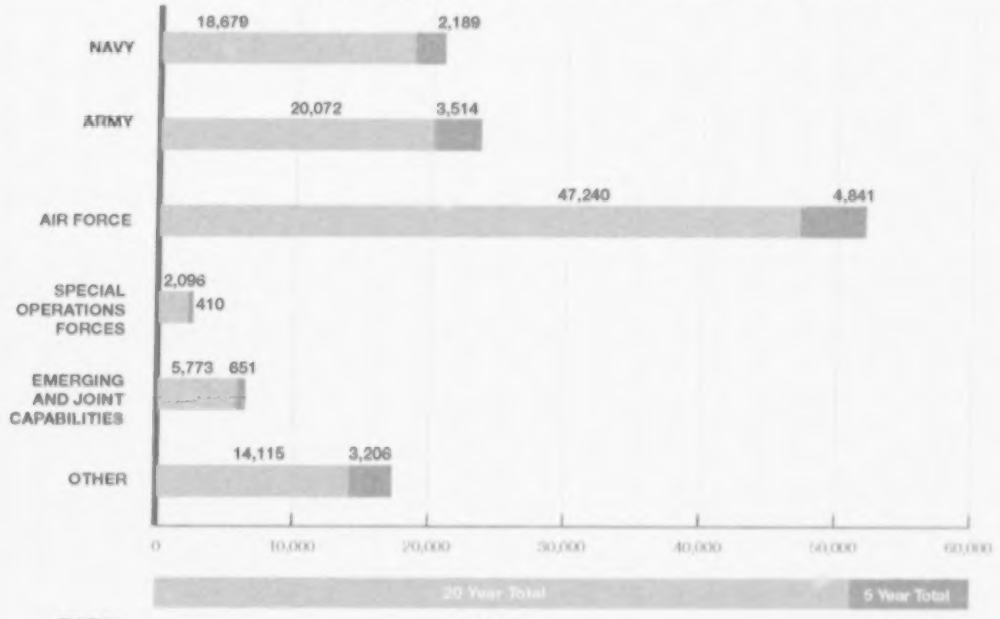
HOW INVESTMENTS ARE PRESENTED

Strong, Secure, Engaged **was released in 2017 while Defence Investment Plan 2018 is being released a year later, potentially creating discrepancies in the numbers being used.**

To avoid confusion and ensure consistency between the documents, the numbers presented in the sections that follow—as well as in the detailed tables provided in the Defence Capabilities Blueprint—reflect the same fiscal years used in ***Strong, Secure, Engaged.***

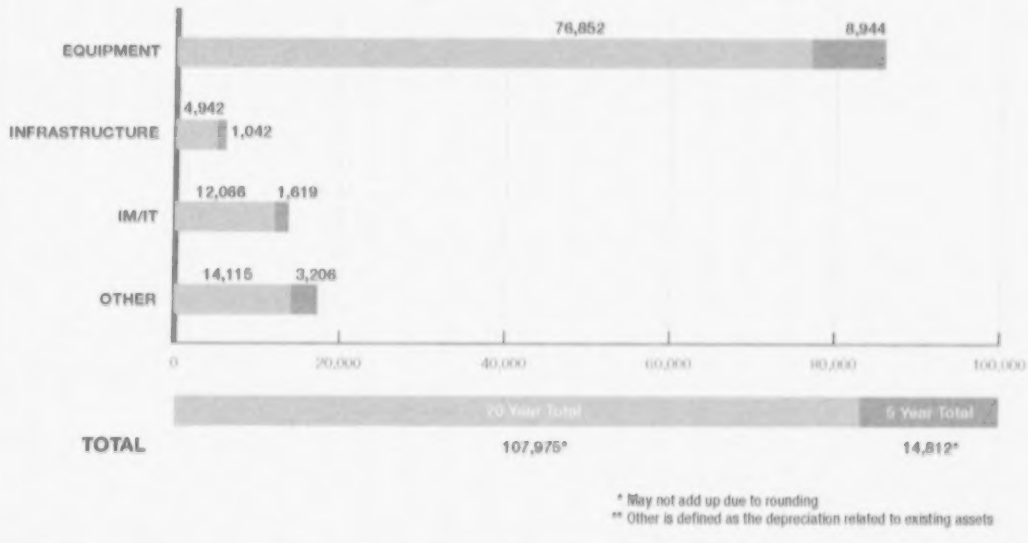
The following tables provide a high-level overview of all Defence spending on capital projects and goods and services for the period 2017-18 to 2021-22, as well as the entire 20-year period.

Table 3 : Capital Expenses on an Accrual Basis by Domain ($millions)



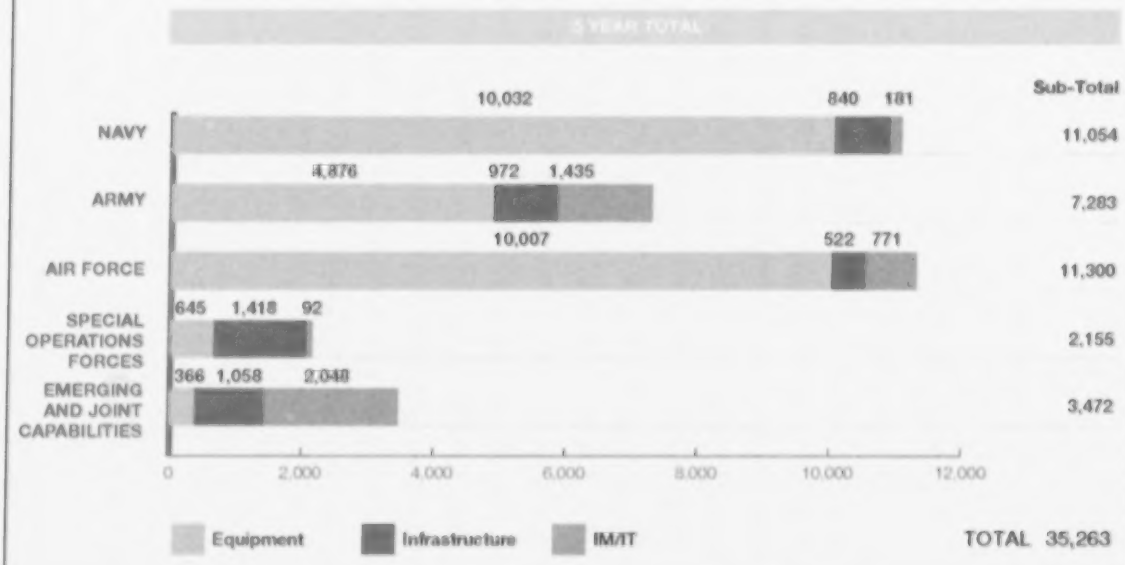
* May not add up due to rounding
** Other is defined as the depreciation related to existing assets

Table 4: Capital Expenses on an Accrual Basis by Asset Class ($millions)



* May not add up due to rounding
** Other is defined as the depreciation related to existing assets

Table 5: Capital Investment on a Cash Basis by Domain and Asset Class ($millions)



DEFENCE INVESTMENT PLAN 2018

ROYAL CANADIAN NAVY AT A GLANCE

RESPONSIVE AGILE COMBAT-READY EFFECTIVE

8,300 REGULAR FORCE

4,600 RESERVE SAILORS

3,700 CIVILIANS

*approximate current staff complement

CURRENT INVENTORY

West Coast		East Coast
5	HALIFAX-CLASS frigates	7
2	VICTORIA-CLASS submarines	2
6	KINGSTON-CLASS maritime coastal defence vessels	6
8	ORCA-CLASS patrol craft training vessels	-

PEOPLE

Master Seaman Yevrag Haisom Evans is a proud member of the Royal Canadian Navy's Submarine Force. He immigrated to Canada from Jamaica in 1991 and joined the navy in 2005 to "get the best of all worlds": education, full-time employment, travel, friendships, and the opportunity to give back to his community and country.

EQUIPMENT

In December 2017, the first Arctic and Offshore Patrol Ship (AOPS), the HMCS Harry DeWolf, took its full shape as the third mega-block was joined to the first two. Later that month, construction of the future AOPS, the HMCS Max Bernays, began. Delivery of Canada's first AOPS is expected in 2019.

CAPITAL INVESTMENT ON A CASH BASIS ($MILLIONS)

CANADIAN SURFACE COMBATANTS JOINT SUPPORT SHIPS VICTORIA-CLASS MODERNIZATION ARCTIC AND OFFSHORE PATROL SHIPS

INFRASTRUCTURE

Major infrastructure upgrades are underway to support Canada's National Shipbuilding Strategy that will deliver modern ships to the Royal Canadian Navy over the next 30 years. The new A and B Jetty at CFB Esquimalt in B.C., and Jetty NJ at CFB Halifax will be home to several of these Canadian-built vessels, including the new Arctic and Offshore Patrol Ships and Joint Support Ships. Work is also underway to remove contaminated sediments from areas of the Esquimalt Harbour seabed where DND operates.

@RCN_MRC

@rcn_mrc

/RoyalCanadianNavy

/RoyalCanadianNavy

Royal Canadian Navy:
http://www.navy-marine.forces.gc.ca/en/index.page

Defence Investment Plan:
www.Canada.ca/Plan-Investissement-Defense

Join the RCN:
https://www.canada.ca/en/department-national-defence/services/caf-jobs.html

DEFENCE INVESTMENT PLAN 2018
CANADIAN ARMY AT A GLANCE

SCALABLE AGILE RESPONSIVE

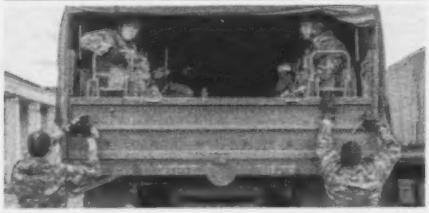
23,400 REGULAR FORCE | **17,640** RESERVE FORCE | **5,140** CANADIAN RANGERS | **3,370** CIVILIANS

*approximate current staff complement

PEOPLE

The Canadian Army has significantly enhanced its recruiting process into its Reserve Force by expediting enrollment. From April 2017 to June 2018, approximately 3,000 new recruits were welcomed into the Army.

EQUIPMENT

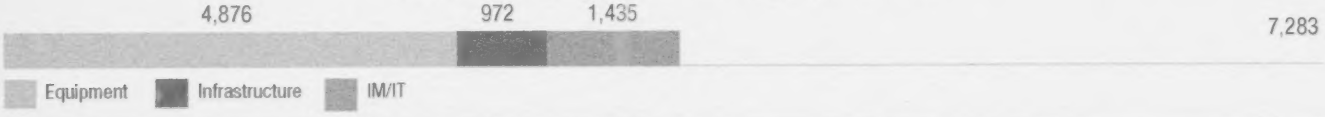


Major milestones achieved for the recapitalization and modernization of the Canadian Army include the light and heavy logistic vehicles, enhanced recovery vehicles, heavy equipment construction vehicles and material handling equipment. In addition, the Land Vehicle Crew Training System project, which will provide soldiers with modernized combat vehicle simulation training, is steadily moving forward.

TRAINING

The Canadian Army launched Full-Time Summer Employment in May 2018. Army Reservists in their first 4 years of service can benefit from guaranteed employment gaining unique and relevant work experience while learning valuable life and leadership skills.

CAPITAL INVESTMENT ON A CASH BASIS ($MILLIONS)



PROJECTS TO HIGHLIGHT

- Modernize Logistic Vehicles
- Develop Joint Chemical, Biological, Radiological and Nuclear Defence
- Develop Joint Counter-Improvised Explosive Defence
- Acquire Ground-Based Air Defence
- Enhance the Light Force

OPERATIONS

Starting in 2018, Army Reserve units will be assigned specific Mission Tasks: mortars, pioneers, light urban search and rescue and direct fire support. These initiatives will enable the Army Reserve to meet changing operational requirements and also fully integrate with the Regular Force ensuring full-time capability through part-time service.

@CanadianArmy

@armeecdnarmy

/Canadian Army

/Canadian Army

Canadian Army:
http://www.army-armee.forces.gc.ca/en/index.page

Defence Investment Plan:
www.Canada.ca/Defence-Investment-Plan

Join the CA:
https://www.canada.ca/en/department-national-defence/services/caf-jobs.html

DEFENCE INVESTMENT PLAN 2018

ROYAL CANADIAN AIR FORCE AT A GLANCE

EFFECTIVE INTEGRATED AGILE

12,000 REGULAR FORCE

2,100 AIR RESERVE PERSONNEL

1,500 CIVILIANS

*approximate current staff complement

PEOPLE

Maj Catherine Blais is the first and only military female test pilot to serve in the CAF. As a very versatile pilot, Maj Blais has flown over 2,700 hours on 30 various military and civilian aircraft, both fixed wing and rotary wing. Her typical day as a flight test pilot consists of flying for half a day and then working on supporting other projects, such as test planning, reporting, participating in review boards, and attending engineering meetings with other DND technical and operational agencies.

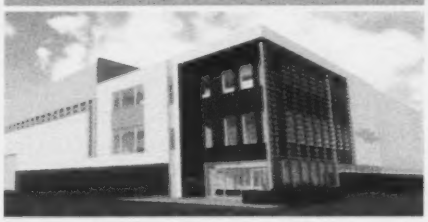
EQUIPMENT

The CH-149 Cormorant is dedicated to search and rescue (SAR) and operates in Canada's challenging geography and climate. ensuring that the Royal Canadian Air Force (RCAF) has a modern fleet and trained aircrews to answer these calls is key to successful rescues. As part of the Cormorant Mid-Life Upgrade (CMLU) project, the Department of National Defence is currently analyzing options to upgrade and augment the fleet to ensure performance until 2040.

The Canadian Armed Forces requires a fighter fleet that is capable, upgradeable, resilient and interoperable with our allies and partners to ensure Canada continues to meet its NORAD and NATO commitments in the future. The fighter aircraft fleet is a critical Canadian Armed Forces capability necessary to enforce Canada's sovereignty, enable continental security, and contribute to international peace and stability.

CAPITAL INVESTMENT ON A CASH BASIS ($MILLIONS)

INFRASTRUCTURE



The future site of the training centre for the newly acquired fixed-wing search and rescue aircraft fleet will be located at 19 Wing in Comox, B.C. The training centre will include simulators and training devices for RCAF aircrew, search and rescue technicians and maintenance personnel who will operate the C-295W search and rescue aircraft.

PROJECTS TO HIGHLIGHT

- Maritime Helicopter Project
- Fixed Wing Search and Rescue
- Future Fighter Capability
- CH-149 Cormorant
- Utility transport aircraft

@RCAF_ARC

@RCAF_ARC

/RCAFIMAGERY

/rcaf1924

Royal Canadian Air Force:
http://www.rcaf-arc.forces.gc.ca/en/index.page

Defence Investment Plan:
www.Canada.ca/Defence-Investment-Plan

Join the RCAF:
https://www.canada.ca/en/department-national-defence/services/caf-jobs.html

CONCLUSION

Strong, Secure, Engaged supports a healthy, highly-motivated and highly-skilled military workforce of soldiers, sailors, airmen and airwomen who are ready and able to make a difference at home and overseas.

As Defence Investment Plan 2018 underlines, *Strong, Secure, Engaged* and its new investments in National Defence will empower an agile, multi-purpose, combat-ready military that is operated by well-trained, well-equipped and well-supported members of the Canadian Armed Forces. Bolstered by the Defence Team's committed and professional civilian employees, this will provide the Government of Canada and Canadians with an adept and adaptable military that stands on guard to protect Canadian interests both domestically and internationally.

Among the greatest strengths of this document is that it is grounded in the most carefully costed defence policy ever developed and aligned to externally-validated costing processes. Predictable and realistic funding will enable better long-term planning, reduce the complexity of managing budgets, and make sure National Defence has the flexibility to pursue the necessary investments that enable the Canadian Armed Forces to succeed in its missions. Coupled with modernized business practices, this means Canada's military will have the resources required to build on its world-class reputation as an effective, highly professional military force.

Equally valuable, for the first time, all Canadians have access to this information in a transparent and publicly accessible document. Defence Investment Plan 2018 brings clarity to how the defence budget is managed and spent, which will help to ensure that the deployment of federal tax dollars to fund defence priorities achieves the results Canadians expect.

The publication of the Defence Investment Plan also will help the defence industry identify new investment opportunities that will generate social and economic benefits that support not only the Canadian Armed Forces but all Canadians in communities large and small from coast to coast to coast.

The Defence Team is proud of its demonstrated capacity, detailed in Defence Investment Plan 2018, to implement *Strong, Secure, Engaged* efficiently and cost-effectively. It is even more proud to support Canada's outstanding women and men in uniform—providing the equipment and tools they need during deployments and addressing the unique demands and stresses of military service on Canadian Armed Forces personnel and their families—as they work to defend Canada and protect all Canadians.